



Launch Mission Execution Forecast

Mission: Falcon 9 CRS-22

Issued: 31 May 2021 / 0900L (1300Z)

Valid: 3 June 2021 / 1324 – 1334L (1724 – 1734Z)



Forecast Discussion: A weak surface front situated across the region this Memorial Day remains the focus for showers and thunderstorms. However, this boundary will wash out over the next couple of days while a trough aloft gradually fills through midweek. This will allow surface high pressure across the central Atlantic to build across the region this week, resulting in progressively deeper southeasterly flow. While late night and morning showers are expected to roll onshore in this regime, afternoon activity should be focused along a rapidly westward moving seabreeze to the west of the Spaceport for mid-to-late week. Remnant clouds and scattered showers during the late morning may attempt to persist later, especially on Delay Day. Thus the main weather concerns for both Launch Day and Delay Day are the Cumulus Cloud Rule and Flight Through Precipitation.

| Launch Day | Probability of Violating Weather Constraints | | | | | | | |
|--|--|--|------------|-----------|-----------|-----------|---------------------------|-----|
| | 20% | Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation | | | | | | |
| | Weather Conditions | | | | | | Additional Risk Criteria | |
| | Weather/Visibility: | Isol showers / 7 mi. | Type | Coverage | Base (ft) | Tops (ft) | Upper-Level Wind Shear: | Low |
| | Temp/Humidity: | 85°F / 68% | Cumulus | Scattered | 3,000 | 9,000 | Booster Recovery Weather: | Low |
| | Liftoff Winds (200’): | 130° 15 - 20 mph | | | | | Solar Activity: | Low |
| 24-Hour Delay | Probability of Violating Weather Constraints | | | | | | | |
| | 30% | Primary Concerns: Cumulus Cloud Rule, Flight Through Precipitation | | | | | | |
| | Weather Conditions | | | | | | Additional Risk Criteria | |
| | Weather/Visibility: | Isol showers / 7 mi. | Type | Coverage | Base (ft) | Tops (ft) | Upper-Level Wind Shear: | Low |
| | Temp/Humidity: | 84°F / 73% | Cumulus | Scattered | 3,000 | 11,000 | Booster Recovery Weather: | Low |
| | Liftoff Winds (200’): | 140° 15 - 20 mph | | | | | Solar Activity: | Low |
| Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity. | | | | | | | | |
| Next Forecast Will Be Issued | | | 1 JUN 2021 | | | | | |